REMARKS:

Reconsideration and allowance of the claims in the application are requested.

Claims 1-62 are in the application.

Independent claims 1-26, 36-55, 57-58, 60-62 together with related dependent claims 2-21, 52, 60-62, 23-24, 53, 37-45, and 57 have been allowed.

Claims 27-35, 56 and 59 have been rejected under 35 USC 103(a) as being unpatentable over US Publication No. 2002/0083025 to J. O. Robarts et al., published June 27, 2002 and filed April 2, 2001, (Robarts, of record) in view of US Publication No. 2002/0126872 Al to M. R. Moore et al., published November 8, 2001 and filed May 4, 1002 (Moore) and in further view of US Publication No. 2001/0039546 A1, Brunk et al., published September 12, 2002, filed December 19, 2001(Brunk).

Applicants have amended claim 27 to include the database description of claim 25 and a separate wireless server based on Figure 2A to distinguish the present invention from the prior art. Claims 28, 34, 37 and 38 have been amended to more particularly describe the claimed feature.

Before responding to the rejections, Applicants would like to distinguish the newly cited art, Moore and Brunk, alone or in combination, from the present invention (Salemenkaita), as follows:

1.   Moore

Moore discloses a method for capturing a GPS object while operating a mobile computing device with a GPS unit. Each geographically relevant object is a collection of data about an actual physical item (such as a billboard advertisement, a place of business, building, landmark or other point of interest), containing the geographical coordinates of the physical item it refers to along with any other valuable physically descriptive information, such as its address or highway location. Paragraph 0048. In contrast, Salmenkaita discloses collecting sensor signals in a metadata vector descriptive of the location and context of a wireless device, and characterized in its current state for recommendation purposes. Page 3, lines 1-4. Moore's signal describe objects related to the terminal and fails to disclose a meta data vector characterizing a current environment of a wireless device.

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2.   Brunk

Brunk discloses devising and utilizing contact signatures. A contact signature is a representation of a content, which is derived from the content itself. A content signature is derived by dividing a signal into at least one set, transforming the set into a frequency based domain determining the features of the transformed set and grouping the features so as to form a content signature of the set. Abstract. In contrast, Salmenkaita discloses a privacy control block computes a message authentication code (MAC) for the application and adds its own digital signature as a certificate of an acceptable application program. The privacy control can include the terms of registration in the digital certificate. Then, when the program requests access to user's private data, the privacy control can automatically check the MAC and its own digital signature to verify the program has not been changed. Page 14, lines 40-45. Brunk is limited to generating and appending a content signature to content sets and fails to disclose generating a message authentication code and independent digital signature for validating an application access to privacy data.

Summarizing, Moore and Brunk fail to disclose the missing elements in Robarts related to meta data vectors and message authentication codes. Moore discloses generating meta data vectors for external objects and not characterizing the state of a wireless device. Brunk discloses content signatures and fails to disclose generating a message authentication code and an independent digital signature for authenticating application access to privacy data. The cited secondary references fail to supply disclosure enabling a worker skilled in the art to modify Robarts to provide recommendation to user devices that are appropriate to the device's current environment. The rejection of claims 27-35, 56 and 59 under 35 USC 103(a) is not supported in the cited art. Withdrawal of the rejection and allowance of claims 27-35, 56 and 59 are requested. In any case, Claim 27 includes the limitation of claim 1 describing the database which served as a basis for the patentability of claim and the like.

Now turning to the rejections, Applicants respond to the indicated Paragraphs of the Office, as follows:

A.   Paragraph 1:

The Examiner's comments are noted.

B.   Paragraph 2:

The Examiner's comments are noted.

C.   Paragraph 3/4:

1.   Claims 27 – 35, 56 and 59 include limitations not disclosed or suggested in Robarts in view of Moore and Brunk, as follows:

a.   Claim 27:

(i)   "a meta data vector which represents the current sensor signals characterizing a current environment of the wireless device with a current context result;"

Moore does not supply the missing element in Robarts. Moore discloses generating meta data vectors descriptive of external data, i.e., billboards, buildings and geographical locations for a system capturing information and fails to disclose generating a meta data vector, which represents the current sensor signals characterizing the current environment of a wireless device with a current context result.

(ii)   "processing of the sensor signals with a context inference engine embodied as programmed instructions executed within a separate wireless network server in response to signals from the user's wireless device:

Robarts discloses a contract server module is provided to a user to provide appropriate sets of attributes that may be required to generate the attributes under a context server. In contrast, Salmenkaita discloses program instructions executed within a separate wireless network server in response to contact-activity pair signals received from a user's wireless device in providing recommendations, as shown in Figure 2A and described in the specification at page 10, lines 36- 42. Applicants can find no disclosure in Robarts of processing context information in a separate wireless network server providing recommendations.

(iii)   "appending a message authentication code and digital signature to ensure the integrity of the meta data vector"

Brunk discloses providing content signatures where Salmenkaita discloses providing message authentication codes and digital signatures to ensure the integrity of a meta

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data vector.

   (iv) "accessing a database of recommendations using the context-activity pair **the database excluding** any user personal data; **the database coupled to the processor, for providing recommendations using the context-activity pair without user identification wherein the database comprises a table listing context-activity pairs each related to (i) a listing of service recommendations and (ii) a listing of number times recommended for each service recommendation;**

   Robarts discloses allowing a user to specify whether to share particular types of context information with others. Paragraph 200. Robarts discloses a personality improvement theme that uses a psychological profile information of the user to assist the user adapting their personality in a design way. Paragraph 234. In contrast, Salmenkaita describes the contents of the database as described in allowed independent claims 1, 36, 57, and 60, which are distinguishable over the cited art.

   Summarizing, Robarts, in view of Moore and Brunk discloses a wearable computing device for improving automated responses to a current context of a user based on automated learning. The current context of the user is represented by a plurality of context attributes and aspects of the context wherein a meta data vector describes external objects and a context signature is included in the context data for privacy reasons.

   Robarts, in view of Moore and Brunk fails to disclose the recommendation system of Salmenkaita in providing recommendations to a user appropriate to a wireless device's current environment by processing sensor signals off-loaded to a wireless network server, the sensor signals characterizing the current environment of the wireless device and being authenticated by a message authentication code and digital signature for accessing a database of recommendations excluding any user personal data. The rejection of claim 27 under 35 USC 103 is without support in the prior art. Withdrawal of the rejection and allowance of claim 27 are requested.

2.   Claim 28:

Robarts, at Paragraphs 066, describes characterizing the user's context with respect to attributes that are not directly observable. Paragraph 200 describes categories of information about the user. Paragraphs 204-206 describe theme data structure related to Privacy, Security and Permission. The cited Paragraphs describe gathering and displaying user information which is not providing new recommendations to a user in a context-activity environment. Robarts fails to disclose or suggest a table of recommendation or adding recommendations not appearing in the table, i.e., new recommendation and removing old recommendations in the table, as described in the specification at page 10, line 40, continuing to page 11, line 4.

3.   Claim 29:

Robarts, at Paragraph 0211, describes categorizing themes as situational; person, etc., Paragraph 227, describes distributing and using themes in support of various businesses. Paragraph 259 describes perceivable computer output devices that can be seen and understood by a user. None of the cited Paragraphs describe the process of compiling statistical usage data about recommendations and storing the usage information in database, as discussed in connection with the consideration of claim 28. Robarts fails to disclose or suggest a table of recommendations. The cited Paragraphs do not support the rejection.

4.   Claim 30:

Robarts, at Paragraph 0118, describes entertainment attributes for a user whether participating in or viewing the attributes, including statistics relevant to the entertainment. The Robarts statistics do not relate to recommendations for a user to make choices. Robarts fails to disclose or suggest statistical usage information relevant to a recommendation .

5.   Claim 31:

Robarts, at Paragraph 069, describes a computer receiving sensor signals related to a cardiac condition. Paragraph 316 describes filtering data from a computing environment and storing the filtered data as a pattern of context attribute values. Paragraph 118 describes entertainment attributes for a user whether participating in or viewing, the attributes including statistics relevant to the entertainment. Robarts' filtering and storing attributes fail to describe or suggest filtering recommendations using statistical information accompanying the

recommendation.

      6.   Claim 32:

Robarts, at Paragraph 301, describes machine learning algorithms that allow GUIs to self modify based on a history of a user's action. Robarts at Paragraph 312 describes incorporating a mechanism into a GUI that allows the GUI to self modify. A self modifying GUI based on a past history of user action does not describe or suggest accessing a history of past recommendations provided to a user.

Robarts, at Paragraph 069, describes a computer receiving sensor signals related to a cardiac condition. Robarts, at Paragraph 316, describes filtering data from a computing environment and storing the filtered data as a pattern of context attribute values.

Robarts fails to describe or suggest filtering recommendations, not previously stored in a history log or table of recommendations, as new recommendations, and providing the new recommendations to a user.

      7.   Claim 33:

Robarts, at Paragraph 301, describes machine learning algorithms that allow GUIs to self modify based on a history of a user's action. Robarts at Paragraph 312 describes incorporating a mechanism into a GUI that allows the GUI to self modify. Robarts at Paragraphs 0275-0276 describes a manual feedback mechanism for a rating of the appropriateness of a suggested rule involving the user. Robarts fails to describe or suggest filtering recommendations or a table of recommendations including a rating of each recommendation.

      8.   Claim 34

Robarts, at Paragraphs 74- 077, describes application programs stored in a memory for word processing, spread sheet, etc. Robarts fails to describe an application program layer, as described in the specification at page 5, lines 19 -24.

      9.   Claim 35:

Robarts, at Paragraph 118, describes entertainment attributes for a user whether participating in or viewing the attributes including statistics relevant to the entertainment. Paragraph 211 describes categorizing themes as situational; personal, etc. Paragraph 227 describes distributing and using themes in support of various businesses. Paragraph 259

describes perceivable computer output devices that can be seen and understood by a user. Robarts fails to disclose or suggest providing portions of the database to a third party provider, as described in the specification at page 11, lines 20-25

     10.   Claim 56:

     Robarts at Paragraph 193-197 describes examples of a user interface to explicitly control various theme related information or specify context information .Robarts, at Paragraph 005, describes background information related to computer systems providing context information appropriate to a user's current context. The cited Paragraphs fails to describe a database of context-activity pairs and related service recommendations. as described in the specification at page 3, lines 10-15.

     Robarts, at Paragraph 200, describes categories of information about the user. Paragraphs 204-206 describe theme data structure related to Privacy, Security and Permission. Paragraphs 211-216 describe categorizing themes as situational; person, etc., and a theme server for distributing themes to theme user computing devices . The cited Paragraphs describe distributing and controlling themes to them user computing devices and fail to describe controlling access of applications to private context information.

     Robarts, at Paragraphs 254-256, describes a computer system using explicit and implicit models exchanging information of user context. Paragraph 247 describes limitations in implicit model executing in a computer system. Paragraph 265 describes an implicit context model which makes suggestions for computer actions based on current and previous user context. Robarts fails to describe or suggest alternative recommendations provided to a wireless device from a database of context-activities using a recommendation algorithm.

     11.   Claim 59:

     Claim 59 depends from claim 27, via claim 56, and is patentable on the same basis as claim 27 and/or claim 56.

     Summarizing, Robarts describes a wearable computing device for improving automated response to a user, based on automated learning, the current context of the user being represented by a plurality of context attributes, and fails to describe a mobile phone or PDA sensing a user's context, accessing a database of recommendations, excluding user personal information, according to a user context-activity pair, the database providing

recommendations to the user wherein the recommendations are rated and new, as described in claims 27-35, 56 and 59.

CONCLUSION:

Having amended claims 27, 28 and 34 and 37 and 38 to further distinguish the present invention from the cited art, Applicants request entry of the amendment, allowance of claims 27-35, 56 and 59 together with independent claims 1-26, 36-55, 57-58, 60-62 and passage to issue of the case.

AUTHORIZATION:

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4503, Order No. 4208-4012. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4503, Order No. 4208-4012. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.
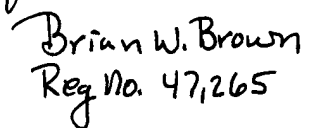
Respectfully Submitted,

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